Peer Reviewed
International Journal Of Drug Discovery And Development
IJDDD Vol.01, Issue.01, No: 29-31,2016
ScienceVier
A new era of publications

NEONATAL MUCOSAL IMMUNOLOGY

Professor Arnaldo Cantani
Department of Pediatrics,Rome University La Sapienza

International Journal of Drug Discovery and Development
(IJDDD)

Corresponding Author: Professor Arnaldo Cantani

NEONATAL MUCOSAL IMMUNOLOGY

The lymphoid tissues of the mucosal surfaces of gastrointestinal (GI), respiratorytracts, etc, on the whole called MALT, in addition to the primary function ofpreserving sterile the delicate epithelial surfaces in contact with the externalenvironment, should also able to recognize the external antigens and to respond bysensitizing CD4 T cells. If there is a malfunction in normal physiology, the hostis at risk of enduring cell-mediated tissue damage. Cell-mediated immunity (CMI)resembles a double edged sword, since many aspects of this cascade imply the
immanent risk of being detrimental to the structures to be protected; thus it isevident the necessity of reducing the immune response impact on mucosal surfaces, by limiting at the least needed for the appointed goal, to eliminate pathogenicantigens. Although manifold defense barriers both natural and immune (such as sIgA)provide reliable defense lines for the epithelial external surfaces, the highsolubility and low MW of many non pathogenic antigens, either inhalant or dietary, make a frequent event the antigen penetration within epithelial tissues.

Fetal Mucosal Immunology

An array of factors acting during the intrauterine life has been shown as promotingfetal mucosal immunology in children. The in utero sensitization, recently amplifiedby substantial data, has gained a salient place among the prenatal factors. CB Tlymphocytes proliferate in the presence of allergens, while testing CB cells witha-lactalbumin, ß-lactoglobulin and bovine seroalbumin, there was a meaningfulproliferative response. Both an intrauterine sensitization to foods, andaeroallergens were demonstrated, hence supporting the concept that fetal programmingby the mother during the second and early third trimester of pregnancy results in
FIS T cell priming The recent observation of HDM in amniotic fluid collected duringamniocentesis at 16 to 17 weeks of gestation and in CB provides evidence that boththransplacental and transamniotic routes of exposure can occur in utero.Consequently, the hypothesis that FIS T cells are exposed during gestation tomaternally derived allergens is supported by a line of evidence. amd maternalexposure to allergens may prompt the development of fetal T-specificresponses. Therefore, we may propose timing in the FIS, which is immunologicallyactive before 16 weeks of gestation, as I demonstrated in a study of staminal cells that were resolutive in a variety of disease.

References

1. Cantani A. Lesson held at the Catholic University on Pediatric Allergy andImmunology, March the 8th 2011
2. Bahna SL, Heiner DC. Allergies to milk, Grune and Stratton: New York 1980
3. Cantani A. Allergologia e ImmunologiaPediatrica.VerduciEditore: Roma 2000
4. Cantani A. Pediatric Allergy, Asthma and Immunology. Springer: Heidelberg 2008
5. Cantani A, Micera M. A study on 300 asthmatic children, 300 controls and their parents confirms the genetic transmission of allergy and asthma. Eur Rev Med PharmacolSci 2011; 15: 1051-1056
6. Nwaru BI, Erkkola M, Ahonen S, et al. Age at the Introduction of solid foods during the first year and allergic sensitization at age 5 years. Pediatrics. 2010; 125; 50-59
7. Cantani A. A home-made, meat-based formula for feeding atopic babies: A study in children. Eur Rev Med PharmacolSci 2006; 10: 61-68
8. Cantani A. The struggle for breastfeeding. Ann Allergy 1987; 59: 84